

Question 1

What two taste qualities use a G protein during the transduction process?

- A) sweet and sour
- B) bitter and salty
- C) sour and salty
- D) salty and sweet
- E) sweet and bitter

Answer: <https://biology-forums.com/index.php?topic=437870>

Question 2

Where is the thermoregulatory center?

- A) hippocampus
- B) amygdala
- C) medulla oblongata
- D) pons
- E) hypothalamus

Answer: <https://biology-forums.com/index.php?topic=439431>

Question 3

What stimulates atrial natriuretic peptide release?

- A) distension of the atrial wall due to an increase in plasma volume
- B) distension of the atrial wall due to an increase in blood pressure
- C) changes in the concentration of potassium in the blood of the atrium
- D) renin
- E) changes in the concentration of sodium in the blood of the atrium

Answer: <https://biology-forums.com/index.php?topic=440297>

Question 4

Okazaki fragments are

- A) small sections of DNA that do not code for protein found within a gene.
- B) protein fragments released from a proteasome.
- C) small sections of nonsense code found between genes.
- D) sections of newly formed DNA, built on the leading (3' to 5') template strand.
- E) small sections of newly formed DNA, built on the lagging (5' to 3') template strand.

Answer: <https://biology-forums.com/index.php?topic=438180>

Question 5

As the volume of the lungs increases, intra-alveolar pressure (increases / decreases).

Answer: <https://biology-forums.com/index.php?topic=438355>

Question 6

The hormone insulin is a peptide hormone consisting of two polypeptides held together by disulfide bridges.

- A) True
- B) False

Answer: <https://biology-forums.com/index.php?topic=438529>

Question 7

When the Na to power of ((+))/ K to power of ((+)) pump moves its bound molecules of Na to power of ((+)) to the outside of the membrane, it

- A) binds to ATP to release the energy required to power the return trip.
- B) pumps more K to power of ((+)) back into the cell than the amount of Na to power of ((+)) that just came out.
- C) releases the bound ATP to return to its normal confirmation.
- D) cannot return to the inside empty-handed, so it must bind two K to power of ((+)) first.
- E) immediately returns to the inside of the cell, ready to transport more Na to power of ((+)) back outside.

Answer: <https://biology-forums.com/index.php?topic=439673>

Question 8

Tubular epithelial cells of the collecting duct and distal tubule contain receptors for what hormone that stimulates sodium reabsorption?

- A) aldosterone

- B) antidiuretic hormone
- C) atrial natriuretic peptide
- D) renin
- E) erythropoietin

Answer: <https://biology-forums.com/index.php?topic=439263>

Question 9

The rate at which an enzyme-catalyzed reaction occurs can be increased by

- A) changing the enzyme's conformation, thereby reducing its affinity for the substrate.
- B) decreasing substrate concentration.
- C) decreasing temperature.
- D) releasing the cofactor that was bound to the enzyme.
- E) increasing enzyme concentration.

Answer: <https://biology-forums.com/index.php?topic=438721>

Question 10

Antidiuretic hormone increases water reabsorption by increasing the permeability of the distal tubule and collecting duct to water.

- A) True
- B) False

Answer: <https://biology-forums.com/index.php?topic=440460>

Question 11

Which of the following leukocytes has cytoplasmic granules?

- A) neutrophils only
- B) basophils only
- C) eosinophils only
- D) both basophils and eosinophils
- E) basophils, eosinophils, and neutrophils

Answer: <https://biology-forums.com/index.php?topic=437424>

Question 12

What enzyme catalyzes the reaction whereby nucleotides are added to the polynucleotide chain during replication?

- A) helicase
- B) histone
- C) DNA polymerase
- D) chromatin
- E) RNA polymerase

Answer: <https://biology-forums.com/index.php?topic=438163>

Question 13

An ion's net electrochemical force will tend to move that ion across the membrane in a direction that will cause membrane potential to move toward that ion's equilibrium potential.

- A) True
- B) False

Answer: <https://biology-forums.com/index.php?topic=438486>

Question 14

As the volume of the chest wall increases, the concomitant expansion of the lungs is due to a(n)

- A) decrease in transpulmonary pressure.
- B) decrease in intra-alveolar pressure.
- C) increase in atmospheric pressure.
- D) increase in transpulmonary pressure.
- E) increase in intrapleural pressure.

Answer: <https://biology-forums.com/index.php?topic=437950>

Question 15

During what phase of the cell cycle does rapid protein synthesis occur as the cell grows to double its size?

- A) G0
- B) G1
- C) G2

- D) S
- E) mitosis

Answer: <https://biology-forums.com/index.php?topic=438195>

Question 16

Saxitoxin (STX) is the most well-known paralytic shellfish toxin caused by the phenomenon known as "red tide." Which statement below best describes why this neurotoxin causes paralysis?

- A) It blocks ligand-gated channels on the postsynaptic membrane, which blocks signals leaving the central nervous system.
- B) It acts on the potassium channels within a neuron, hyperpolarizing the cell membrane; therefore, no action potential can be generated.
- C) It prevents the synaptic vesicles from migrating to the axon terminal; therefore, no action potentials are generated.
- D) It acts by blocking voltage-gated sodium channels which are needed to generate an action potential.
- E) It acts on the hypothalamus of the brain, shutting down all neurological functions.

Answer: <https://biology-forums.com/index.php?topic=438096>

Question 17

The muscles of respiration are

- A) smooth muscle, innervated by the somatic nervous system.
- B) skeletal muscle, innervated by the autonomic nervous system.
- C) smooth muscle, without innervation.
- D) smooth muscle, innervated by the autonomic nervous system.
- E) skeletal muscle, innervated by the somatic nervous system.

Answer: <https://biology-forums.com/index.php?topic=437943>

Question 18

At metabotropic receptors, a(n)

- A) neurotransmitter binding to a receptor opens channels that are a separate protein from the receptor.
- B) neurotransmitter binding to a receptor opens or closes channels that are a separate protein from the receptor.
- C) ion binding to a receptor opens channels in the plasma membrane.
- D) neurotransmitter binding to a receptor stimulates a G-protein, which then activates a second messenger through one or more enzymatic actions.
- E) neurotransmitter binding to a receptor opens or closes channels that are part of the same protein as the receptor.

Answer: <https://biology-forums.com/index.php?topic=438644>

Question 19

Ejection of blood from the right ventricle will continue until

- A) pressure in the aorta is less than pressure in the right ventricle.
- B) pressure in the pulmonary artery is greater than pressure in the right ventricle.
- C) pressure in the pulmonary artery is less than pressure in the right ventricle.
- D) pressure in the aorta is greater than pressure in the right ventricle.
- E) the pulmonary semilunar valve contracts, inducing closure.

Answer: <https://biology-forums.com/index.php?topic=440238>